

REVIEWS

Flora of Turkey and the East Aegean Islands, Vol. II. By P. H. DAVIS. xii + 581 pp. Edinburgh University Press; Aldine Publishing Co., Chicago. 1967. \$33.50.

Turkey, a vast country of some 300,000 square miles, has an exceptionally rich flora of vascular plants amounting to perhaps 8,000 species. This figure is consistent with the physiographic diversity of the area and with its crucial position at the meeting place of three vast phytogeographical regions, the Euro-Siberian, Mediterranean, and Irano-Turanian. About a fifth of the species of vascular plants found in Turkey appear to be endemic, with exceptionally rich concentrations in southern and eastern Anatolia. The only earlier comprehensive flora which includes the plants of Turkey is Boissier's six-volume *Flora Orientalis* (1867-1888). Vastly more information is of course available about the plants of Turkey at present, with the extensive collections of Peter Davis and his collaborators being of special importance.

The first volume of the present flora appeared in 1965, and thus the second conforms to the biennial schedule that is contemplated for the eight volumes that will be necessary to complete the flora. The flora includes keys and descriptions, essential synonymy and references, critical taxonomic notes and illustrations, selected distribution maps, citation of types, ecological and phenological information, and general distribution in Turkey.

Volume II includes a list of the major Turkish collections since the completion of the *Flora Orientalis* (i.e., 1888). In this volume are treated such familiar groups as Centrospermae (Caryophyllales, Chenopodiales), Malvaceae, Linaceae, Geraniaceae, Rhamnaceae, and Anacardiaceae. This volume includes families 12-44 of the overall work, and includes such large genera as *Silene* (119 spp.), *Hypericum* (69 spp.), and *Dianthus* (67 spp.). The Caryophyllaceae are the largest family treated, occupying 230 pages—well over a third of the volume. The treatment of genera in this family is of particular interest, since what has traditionally been regarded as *Arenaria* by North American botanists is broken up on persuasive grounds into *Arenaria* s. str., *Minuartia*, *Lepyrodiclis*, and *Moehringia*. *Melandrium* is regarded as a synonym of *Silene* but *Lychnis* is recognized as a distinct genus.

California botanists also will be interested in the division of the *Salsola kali* L. complex by Paul Aellen into *S. kali* and *S. ruthenica* Iljin (including var. *tenuifolia* Tausch.), but applicability of this taxonomic treatment to introduced populations in North America remains to be seen. *Arthrocnemum* is regarded as a genus of perennial plants distinct from the wholly annual *Salicornia*. *Frangula* is recognized as distinct from *Rhamnus*, and the relatively narrow generic standards thus conform closely to those of *Flora Europaea*. Perhaps it is now possible to achieve some measure of uniformity on the often arbitrary problems of the subdivision of genera, and it is to be hoped that the authors of subsequent floras will depart from the reasonable standards of *Flora Europaea* only when the preponderance of evidence is overwhelming.—PETER H. RAVEN, Department of Biological Sciences, Stanford University.

A Handbook of Coniferae and Ginkgoaceae. By W. DALLIMORE and A. B. JACKSON. Revised by S. G. HARRISON. Fourth Edition. xix + 729 pp. William Clowes and Sons Ltd., London and Beccles; and St. Martin's Press, New York, 1967. \$35.00.

The fourth edition of this book, which has been a standard reference work since 1923, exhibits a number of departures from the arrangement and treatment in the previous editions. Some parts are the same as those in the 1954 third edition; for example, the key to the sections is essentially the same, the only difference being the use of the term "male strobili" instead of "staminate flowers"; the keys to the genera are virtually the same and are trichotomous in several places; most of the figures are the same as those used in earlier editions.

In contrast, improvements have been made which clearly show the influence of Dr. Harrison. The order of the listing of taxonomic entities is strictly alphabetical